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The Gentleman, the Detective, and the Housewife

Sensory Worlds of Experiment in Japanese Thoughtography, 1910–1911

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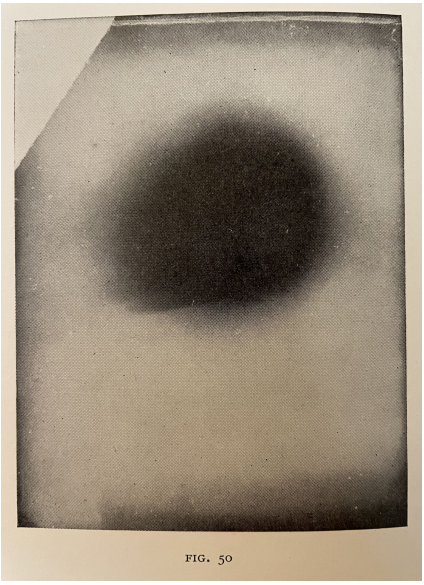
Abstract

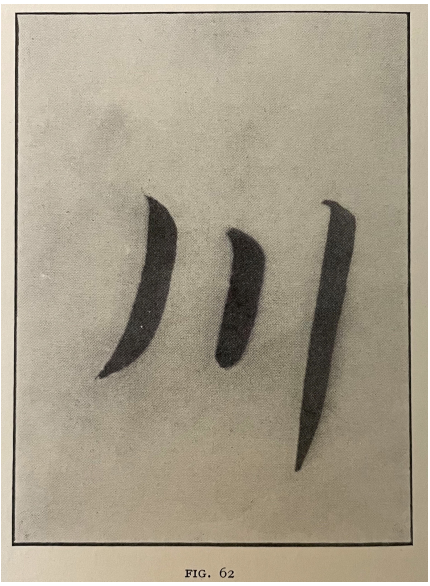
This article examines Japanese experiments concerning the power of "thoughtography," demonstrating how sensory disagreements between psychologists and physicists were concretized through divergent gendered personae within contested spaces of experiment. Specifically, I analyze thoughtography as a story of conflicts between personae of "gentleman" and "detective" within the private, nuclear-familial home of the "housewife." In the early twentieth century, the psychological laboratory had yet to establish its authority in Japan. Successful experiment thus required visiting subjects and navigating the intersensorial spaces of their homes. The strategies through which researchers adapted to homes, and the strategies by which housewives manipulated homes to their advantage, reveal contestations over how to look, touch, and feel in the presence of others. They furthermore reveal that the drive to emulate "Western science" met with contradictions in "Westernization" itself, particularly between demands concerning new protocols of masculine scholarly sociability and the prerogatives of the bourgeois wife and mother.

Keywords

psychology – modern Japan – intersensoriality

What does one see in these photographs? A blotch on the left; three strokes on the right—or to the reader of Chinese characters, the word 'river' (C: chuan;





FIGURES 1A–B Two early thoughtographs by Nagao Ikuko. From Tomokichi Fukurai, *Clairvoyance and Thoughtography* (London: Rider & Co, 1931), 100

J: kawa), written at a tilt (Figs. 1a–b)? Tokyo Imperial University psychologist Fukurai Tomokichi[1] (1869–1952) saw in them evidence: "In the face of all those scientists who, like clouds of fog have gathered together against me, I make the following declaration [...] that thoughtography is a fact."[2] By "thoughtography," Fukurai referred to the ability to inscribe the mind's contents onto photosensitized surfaces without the aid of a camera. This alleged ability he discovered in December of 1910 over the course of experiments with Nagao Ikuko (1871–1911), propelling her into the national spotlight. The two images above are among the thoughtographs which Nagao Ikuko produced.

As suggested by Fukurai's tone, thoughtographic artifacts provoked scientific controversy. Beginning in late 1910 and reaching a peak in the early spring of 1911, the question of what thoughtographs really were formed one of the most publicly visible debates in the history of Japanese science. In its traditional outline, the battle was fought between physics, then the triumphant science of

1 Within the main body of this article, Japanese names are rendered according to linguistic custom, starting with the family name (e.g., Fukurai) followed by given name (e.g., Tomokichi). Within footnotes, all names regardless of origin follow Chicago conventions, i.e., given name followed by family name.

2 Tomokichi Fukurai, *Tōshi to nensha* (Tokyo: Tōkyō Hōbunkan, 1913), 1.

modern Japan, and psychology, a nascent discipline still shaking off its philosophical heritage.[3] Physicists demanded a materialist account of the visible. That available to the eye, as thoughtographs were, evidenced other physical traces—traces of a new form of radiation, or traces of deceptive sleight of hand. Philosophically-oriented psychologists such as Fukurai maintained that thoughtographs were expressions of *sui generis* mental forces irreducible to physical causation: "Spirit," as Fukurai wrote, "transcends the law of Matter."[4] Yet by debate's end, physicists' laws of matter triumphed. Thereafter, Fukurai's lineage of psychology found itself exiled from Japan's scientific community.

This article begins from the premise that for historians of science, more was at stake in thoughtography than debates between the material versus mental. Underneath the surface of their ontological disagreements, Japanese physicists and psychologists alike faced a common practical challenge of managing embodied sensation and affect at a time when spaces of experiment, as well as the scientific personae which inhabited them, were still unsettled. Early thoughtographic experiments thus offer unique insight into struggles over the emplacement of scientific knowledge production and the identity of scientific practitioners in a non-Western country as it attempted to assimilate itself not only to an imagined standard of "Western science," but to contradictory currents of Western sociability and spatiality.

To understand how differing actors met this challenge, I propose that we reframe early thoughtographic experiments as a gendered confrontation between sensory worlds. "Worlds of sense," Constance Classen tells us, by deciding what can be legitimately sensed, how, and by whom, each generate a "social order" and "way of knowing."[5] Sensory worlds are thus sites for exploring socio-epistemic entanglements. Building on Classen's definition, I argue that rather than disputes over whether *sui generis* mental forces existed out-

3 In its entirety, these set of debates are referred to as the "Senrigan Incident" (*Senrigan jiken*). The most cited scholarly treatments are those of Hirotaka Ichiyanagi, e.g., Hirotaka Ichiyanagi, *'Kokkuri-san' to 'Senrigan': kindai Nihon to shinreigaku*, 2nd ed. (Tokyo: Seikyūsha, 2021), esp. 80–145, which overlaps substantially with Hirotaka Ichiyanagi, "Senrigan jikken wa kagaku no bunseki taishō tarieru ka: shinrigaku no kyōkaisen o meguru ronsō," in *Meiji-Taishō Nihon no kagaku shisōshi*, ed. Osamu Kanamori (Tokyo: Keisō shobō, 2017), 369–410. The sole English-language overview is Miki Takasuna, "The Fukurai Affair: Parapsychology and the History of Psychology in Japan," *History of the Human Sciences* 25, no. 2 (2012): 149–164.

4 "The Experiment of the Thought-graphy with Japanese Mediums" (1928), 16–17. MS SPR/Mediums/T Fukurai, Cambridge University Library.

5 Constance Classen, *Worlds of Sense: Exploring the Senses in History and Across Cultures* (London: Routledge, 1993), 1.

side a realm of physical causation, thoughtography was fundamentally a matter of gender and power in the management of the senses. Specifically, divergent interpretations of thoughtographic artifacts emerged from disagreement over the proper ways in which to physically sense and affectively feel within female-dominated spaces that could not be easily brought under the control of male scientists.

The contours of this problem were set by the epistemic and sociopolitical entanglements of Japanese modernization itself. A competitive drive to adopt and rival "Western science" comprised one definitive vector of Meiji modernization efforts. Yet simultaneously, Japan also embraced social transformations in the meanings, practices, and spaces of gender. On the one hand, Meiji scholars and scientists sought to define their social status through Western-inspired models of "gentlemanly" behavior. On the other hand, the same period saw the emergence of the Victorian home and housewife as an ideal of bourgeois female identity.

The confluence of these forces placed the nascent discipline of psychology in a curious situation. At the beginning of the twentieth century, the psychological laboratory had yet to establish authority in Japan. Psychological experiment often resembled fieldwork, necessitating extended visits to the personal residences of subjects and concessions to the domestic codes that regulated those spaces.[6] As teased above, these codes were undergoing tremendous change. The premodern Japanese household had been large, sheltering multi-generational lines, collateral kin, and unrelated tenants. However, by the early twentieth century, large households were giving way to the ideal of the "home"—a space centered on the nuclear family, defined through protective privacy, and governed by a housewife. The result, I argue, was that early thoughtographic experiments played out as a series of conflicts within private, nuclear-familiar homes between the personae of "gentleman," "detective," and "housewife." Housewife prerogative over domestic space threatened male scientists' ability to dictate controlled parameters of experiment. Scientists who fashioned themselves as "gentlemen" strove to articulate an experimental ethos that might advantageously align with new rules of the home. Others, deeming these rules barriers to true experiment, fashioned themselves as "detectives," claiming the right to intrude and investigate in ways which broke with propriety. In this manner, the history of thoughtographs became inseparable

6 Naoyuki Osaka, ed., *Jikken shinrigaku no tanjō to tenkai* (Kyoto: Kyōtō Daigaku Gakujutsu Shuppankai, 2000). For comparison to Britain, see Efram Sera-Shriar, *Psychic Investigators: Anthropology, Modern Spiritualism, and Credible Witnessing in the Late Victorian Age* (Pittsburgh: University of Pittsburgh Press, 2022).

from differing strategies for navigating the complex intersensorial space of the housewife's home. The numbers and types of bodies, the sounds they made, the objects they touched, the places they could roam: all became a matter of scrutiny and debate in the making of modern Japanese science.

In what follows, I offer three *stories* of early thoughtography's sensory worlds. The stories derive from four sources: an account of experiments with Nagao Ikuko published by physicists Fuji Noriatsu (1883–1923) and Fujiwara Sakuhei (1884–1950) in February 1911, and three works by Fukurai Tomokichi, the first published as a delayed rejoinder to Fuji and Fujiwara in 1913; the second a pamphlet written for the International Spiritualists' Congress in 1928; and the third an introduction to his research for Anglophone audiences in 1931.[7] My first two stories explore the sensory worlds of Fukurai Tomokichi and Fuji Noriatsu, respectively, using these to illustrate the contrast between scientific masculinities of gentleman and detective. The third story treats the sensory world of Nagao Ikuko, highlighting the ways she employed the space of the new home and its codes to frustrate researchers.

I call these "stories," for I employ techniques of literary reconstruction and narration to elicit each actor's sensory world. This method proved most crucial in the case of Nagao Ikuko, who left no documents in her own voice, remaining for us today through the records of male scientists who sought to control and define for posterity their sensory experience of her home. Recovering what might have been her own sensory world thus necessitated a strategy of differential juxtaposition across patriarchal sources, taking points of divergence in the observations of Fukurai, Fuji, and Fujiwara, and arranging these in counterpoint with contemporaneous literature on domestic management, decorum, and protocol. In this manner, I read gaps and slippages between patriarchal sources against one another to reconstruct the unwritten agencies and understandings of female actors.

Furthermore, my approach through "stories" extends two additional methodological points. First, I propose that historians of science can read witness accounts as a deposit—hidden in incidental observations, unstated assumptions, and unreflective practices—of repressed sensory multiplicities. Second, I wish to struggle against the normalization of a single, unequivocal sensory world represented by the historian's omniscient framework of narration. I elaborate further on these methodological questions in the article's conclusion.

7 Respectively, Noriatsu Fuji and Sakuhei Fujiwara, *Senrigan jikken roku* (Tokyo: Dai Nihon tosho, 1911); Tomokichi Fukurai, *Tōshi to nensha*; id., "The Experiment of the Thought-graphy"; id., *Clairvoyance and Thoughtography* (London: Rider & Co., 1931).

1 The Gentleman

For all their talk about experiments, physicists failed to understand experimental method. Of this, Fukurai Tomokichi had become firmly convinced. He began his undergraduate studies at Tokyo Imperial University's Department of Philosophy during a moment of change. A new department was emerging, splitting from Philosophy. At this new department—Psychology—Fukurai pursued his doctorate.[8] His early years were spent translating William James; his later years, preparing a thesis on hypnotism. He earned his PhD in 1905, thereafter joining the faculty of his alma mater.[9]

Fukurai celebrated psychology for transforming philosophy from a set of "speculative thoughts" into a "science that explains and describes the multiple states of consciousness" through "observation and experiment."[10] But unlike a growing number who sought to situate experiment in the laboratory, Fukurai championed going out into the field. Laboratory "experimentalists," as Fukurai labeled them derisively, accumulated disparate facts. The real purpose of psychology was to integrate these piecemeal observations into the total stream of experience—of "life in its all-ness."[11]

The importance of grasping life in its all-ness consumed Fukurai as challenges mounted against his research. In his study of hypnotism, he had encountered reports from abroad of hyperaesthesia, a condition of superhuman sensory enhancement linked to hypnotic states.[12] Hoping to discover similar cases in Japan, he turned to a new source of information: gentlemanly networks. Coined only circa 1885, the modern Japanese term for "gentleman," *shinshi*, bore a particular valence in Fukurai's times.[13] Japan had transitioned after 1868 from a society divided into hereditary status groups—of which samurai occupied the top rung—to a nation-state in which male citizens enjoyed nominal legal equality. The figure of the "gentleman" emerged against the backdrop of

8 Tatsuya Sato and Takao Sato, "The Early 20th Century: Shaping the Discipline of Psychology in Japan," *Japanese Psychological Research* 47, no. 2 (2005): 52–62.

9 Tomokichi Fukurai, *Zēmusu-shi shinrigaku* (Tokyo: Ikuseikai, 1900); id., *Saimin shinrigaku gairon* (Tokyo: Seibidō, 1905).

10 Tomokichi Fukurai, "Shinrigaku," in *Sōtōshū kyōdō kōshūin kōen shū*, vol. 1, ed. Sōtōshū Kyōdō Kōshūin (Tokyo: Kōmeisha, 1904), 262, 266.

11 Tomokichi Fukurai, "Tōshi to nensha wa sekai no gakusha no imada kenkyū sezaru tokoro nari," *Shin kōron* 28, no. 9 (1913): 8.

12 Fukurai, *Saimin shinrigaku*, 172–182.

13 Donald Roden, "Thoughts on the Early Meiji Gentleman," in *Gendering Modern Japanese History*, ed. Barbara Molony and Kathleen Uno (Cambridge, MA: Harvard University Asia Center, 2005), 91.

the abolition of hereditary status, defining itself in opposition to the samurai. Samurai symbolized the vested privileges of a closed ruling class marked by aggressive anti-foreignism and resistance to internationalization. In contrast, gentlemen derived legitimacy from socio-institutional mechanisms of alleged meritocracy, standing as the crowning products of Japan's Westernized public education system which, through a series of competitive entrance examinations, led from the nation's elite higher schools to Tokyo Imperial University, and thereafter to civil service positions—including public university faculty positions. This educational track was legally closed to women, who could at best seek higher education at vocational schools (*senmon gakkō*) or, if they had means, study at universities abroad.

To be a gentleman was, in short, to embrace an ideal of masculinity defined by meritocracy, Western learning, and civic leadership. Among one another, gentlemen saw it their duty to make Japan "civilized" and "cosmopolitan."[14] Among critics, gentlemen constituted a "bureaucratic power elite." Moreover, by the early twentieth century, a younger generation of nationalists, nostalgic for samurai masculinity, had begun to mock gentlemen for their allegedly "effeminate" subordination to Western trends.[15]

Hypnotism was one of these fashionable Western trends, and in February 1910, Fukurai's gentlemanly network bore fruit. Through a former student, followed by a school headmaster, followed by an army lieutenant, Fukurai was introduced to Mifune Chizuko (1886–1911). Mrs. Mifune[16] claimed that through deep meditation similar to hypnosis, she had unlocked an ability known as *senrigan*, allowing her to see through objects and across distances occluded to normal vision.

Fukurai's experiments with Mrs. Mifune from February through April of 1910 sparked a sensation. Objects within sealed envelopes, inside boxes, behind walls: Mrs. Mifune seemed capable of seeing them all. As national interest grew, so too did demands that Mrs. Mifune submit herself to the broader community of scientists, particularly physicists. These demands worried Fukurai. The dominant vision of physical experiment wished to strip life of its all-ness and confine it to the laboratory. Yet to truly understand the mind, Fukurai coun-

14 Roden, "Thoughts"; Jamyung Choi, "The Hegemony of Tokyo Imperial University and the Paradox of Meritocracy in Modern Japan," *Journal of Japanese Studies* 44, no. 1 (2018): 89–116.

15 Jason G. Karlin, "The Gender of Nationalism: Competing Masculinities in Meiji Japan," *Journal of Japanese Studies* 28, no. 1 (2002): 41–77.

16 In his writings, Fukurai habitually referred to both Mifune Chizuko and Nagao Ikuko by the title *fujin*, literally meaning "wife," which I translate here as "Mrs." as a visual trace of the gentlemanly persona.

tered, one had to grasp "the totality of a living human's mental state in its everyday activity."[17] Experiment and observation, he argued, should take place "in the real everyday life" of subjects—in the environments and according to the methods to which subjects were "accustomed and familiar"—for small variations might have dramatic effects on the heightened mental states required for abilities such as *senrigan*.[18]

But the pressure was too great. From the 14th to 17th of September 1910, Fukurai found himself with Mrs. Mifune conducting a series of public experiments attended by academics across the faculties of Tokyo Imperial University. Despite Mrs. Mifune's seeming success, attendees, particularly the physicists Yamakawa Kenjirō (1854–1931) and Tanakadate Aikitsu (1856–1952), were outspokenly critical. Although open to the possibility that *senrigan* powers might exist, they accused Fukurai of accommodating too many of Mrs. Mifune's demands in ways that invalidated the experiment. This included Mrs. Mifune's request that she be allowed to turn her back to the audience and lay her hands on the boxes within which the objects for her to discern had been sealed.[19]

In response, Fukurai explained that while such measures were indeed problematic "from the scientific point of view," they were necessary steps on the road to science. To explain, he drew an analogy to "bad habits." It was ineffective, he pointed out, to eliminate bad habits by brute force. A demand for immediate change would alienate, especially among the more delicate female sex. Concessions to Mrs. Mifune were his attempts to "become friendly" with his experimental subject, building a rapport that would make her receptive to his "gradual guidance."[20]

Fukurai's invocation of a "friendly" rapport with Mrs. Mifune echoed broader discourses of the gentleman. A central point which distinguished gentlemen from old samurai was the nature of their relationship to women. Only a year earlier, in his 1909 address to students at Tokyo Imperial University's graduation ceremony, Yamakawa Kenjirō himself had contrasted the ethics of the gentleman and the "warrior" (*bushi*) as follows: "The difference between the two is that whereas the gentleman honors his wife above all, the warrior places his lord highest."[21] More broadly, gentlemanly literature of mid-Meiji era placed

17 Fukurai, "Tōshi to nensha wa sekai," 8.
18 Fukurai, *Clairvoyance*, 73.
19 Ichiyanagi, "Senrigan jikken," 375–376.
20 Fuji and Fujiwara, *Senrigan*, 94–95; Fukurai, *Tōshi*, 12–13.
21 Quoted in Natsume Ken'ichi, "Yamakawa Kenjirō no kagaku shisō to shōbu shugi: butsurigaku, shakaigaku, fukoku kyōhei," in *Meiji Taishō no kagaku shisōshi*, ed. Osamu Kanamori (Tokyo: Keisō shobō, 2017), 82.

emphasis on the need to foster "associational arts" (*kōsaijutsu*) of mixed-gender interaction. Chastising samurai masculinity for its homosocial exclusion of women, self-appointed gentlemen argued that the cultivation of intellectual and spiritual bonds with women was considered "the highest representation of a civilized gentility."[22] Most commentators, to be sure, concerned themselves with sociability at dinner parties and balls. But for Fukurai, experimental spaces were also an important site for the demonstration of mixed-gender "associational arts."

Fukurai's detractors would have none of this. A standoff was brewing. Then, on the 23rd of October, the *Asahi Shinbun* reported the discovery of a *senrigan* powers in Nagao Ikuko (1871–1911), resident of the southwestern town of Marugame. Unlike Mrs. Mifune, Mrs. Nagao did not need to touch objects in order to see what was inside them. Excited, Fukurai wrote to one of the gentlemen mentioned in the article, Kikuchi Shuntai (1875–1967), a graduate of Tokyo Imperial University and translator of German works friendly with the Nagao family. Might Kikuchi broker an introduction to Mrs. Nagao? Before the end of the month, a reply came directly from the lady. Thanking Fukurai for his interest, she nonetheless rejected his request, stating that she would have "difficulty concentrating because she would feel as if 'electrified' if seated in the same room with him." Fukurai agreed to conduct experiments by correspondence, while reiterating his desire that they eventually meet in person.[23]

However, by the 15th of December, Fukurai could no longer contain his impatience. On that day, he received in the mail a set of undeveloped photographic plates from Marugame. These he had sent to Mrs. Nagao earlier in the month, imprinting on them various calligraphic inscriptions, inserting them into a dark envelope, and sealing the envelope in a pasteboard box. The box returned, seal unbroken, Fukurai took the plates to his own darkroom for developing. On the plates appeared blotches in addition to the original calligraphy. For Fukurai, this suggested that Mrs. Nagao's "psychic activity" was generating its own kind of "mental energy" which could be directed onto the plates to generate "localized exposures."[24] It was, as he dubbed it, *thoughtography*. He wrote Mrs. Nagao that it was now imperative he visit in person. At the same time, eager to claim priority over this new discovery, Fukurai announced his thoughtographic hypothesis to the press.

A week later, a reply from Mrs. Nagao finally came. She consented to Fukurai's visit on the condition that he ensure exclusivity: requests from journalists

22 Roden, "Thoughts," 79–80.

23 Fukurai, *Clairvoyance*, 69–73.

24 Ibid., 93–95.

and other researchers had exploded in the past days, and she wished Fukurai to take responsibility for turning all these seekers away. Fukurai agreed and set off to Mrs. Nagao's residence in Marugame, visiting her on the 26th of December. Much to his dismay, however, he found her "out of spirits."[25] She had been preoccupied, she told him, with "tending to her sick husband and child."[26] Fukurai called repeatedly the next several days, but Mrs. Nagao remained "badly fatigued" and unable to perform successfully.[27] Disappointed, he broke for the end-of-year holidays.

January, however, did not bring with it good news. On the morning of the 3rd, a researcher named Fujiwara Sakuhei from the Central Meteorological Observatory arrived in Marugame, petitioning Fukurai for permission to experiment with Mrs. Nagao. Furthermore, Fujiwara informed Fukurai that the physicist Yamakawa Kenjirō and his team were on their way to Marugame—the same Yamakawa who had already publicly criticized Fukurai following the mid-September *senrigan* experiments.[28] Fukurai reported the news to Mrs. Nagao, notifying her that he would regrettably be unable to reject Yamakawa.[29]

As Fukurai feared, Yamakawa and his team showed no concern for the delicate rapport between researchers and subjects. Arriving on the 4th of January, Yamakawa proceeded to Mrs. Nagao's home, demanding the immediate start of experiments. Throughout that afternoon and evening, he and his team refused to accommodate Mrs. Nagao's preferred methods and her complaints of fatigue. The same scene repeated itself the next morning. Only after Mrs. Nagao's daughter appeared, complaining of a stomach pains, did Yamakawa relent, albeit not before stating that experiments were to recommence as soon as the child had recovered. It seemed obvious to Fukurai that these events "wounded the feelings of the lady."[30]

What followed thereafter demonstrated to Fukurai how necessary polite sociability was for experiment—and how easily it might be undone. When Yamakawa's team resumed work on the 8th of January, Fukurai noticed that they had been joined by a new member—a young physicist by the name of Fuji Noriatsu. Fukurai thought little of it at the time, and proceedings began without incident. But in the midst of their first experiment, Mrs. Nagao suddenly broke down, crying out that she had been tricked, and that the box given to

25 Ibid., 83.
26 Ibid., 87.
27 Ibid., 87.
28 Fuji and Fujiwara, *Senrigan*, 12.
29 Fukurai, *Clairvoyance*, 116–117.
30 Fukurai, *Clairvoyance*, 85; Fuji and Fujiwara, *Senrigan*, 25.

her by the physicists in fact contained no photographic plates at all. Inspection of the box's contents proved her correct. The physicists denied any knowledge. Mrs. Nagao's husband, who had stayed home from work to attend the event, was furious. "Is this really the comportment of scholars?" he exclaimed. "Could these really be the words and deeds befitting gentlemen?"[31] Meanwhile, Mrs. Nagao herself was in tears. Thereafter, the family wished to have no further dealings with more scientists.[32] Fukurai attempted more than once to apologize, but to no avail. Relations could not be restored, and with this his chance to understand thoughtography seemed to vanish.

Only later did Fukurai learn the truth. In mid-February, Fuji Noriatsu published a record of his days in Marugame. In Fukurai's opinion, the account was a testament to physicists' failure at gentlemanly conduct when dealing with experimental subjects. Although Fuji maintained that he was not responsible for the missing plates, he nonetheless relished in elaborately recounting the many mechanisms he had devised to expose Mrs. Nagao. Fukurai's verdict was clear: Fuji had failed to behave as a "man of honour."[33] Instead, he had sought "to impolitely manufacture conditions that would damage Mrs. Nagao."[34] Even worse, it was now too late to reverse the damage. By the time Fuji's experimental record was published, Mrs. Nagao had fallen ill with pneumonia. She passed barely over a week later from complications. "Deeply regrettable," Fukurai noted, but research must go on.[35]

2 The Detective

Fuji Noriatsu (1883–1923) fancied himself a detective by necessity. In the autumn of 1910, after attending Fukurai's public *senrigan* experiments, physicists at Tokyo Imperial University had already floated the notion that the phenomenon might be linked to radiation. With Fukurai's mid-December announcement of a new ability—thoughtography—discovered in Nagao Ikuko, speculation about radiation intensified, colored overtly by feelings of national pride. The fin-de-siècle had already yielded a string of discoveries in the West: Röntgen's X-rays in 1895; the Curies' polonium and radium in 1898;

31 Yokichi Nagao, "Yamakawa-hakase no jikken ni taisuru iken," *Asahi shinbun*, January 20, 1911, 6.

32 Fukurai, *Clairvoyance*, 134–137.

33 Ibid., 131.

34 Fukurai, *Tōshi*, 15.

35 Fukurai, *Clairvoyance*, 130.

Rutherford's alpha, beta, and gamma rays in 1899. Thoughtography teased the possibility that the East, with Japanese scientists at its lead, would soon discover a new form of radiation.[36]

Yet when it came to actual experiments, there were problems. Access was one issue. It had taken much time for the Nagao woman[37] to agree to meet with Fukurai, and she was unwilling to welcome more researchers. Fuji, a young lecturer, lacked the authority to convince her otherwise. But Yamakawa Kenjirō (1854–1931) was another matter. Yamakawa had presided over Tokyo Imperial University's Department of Physics for decades before ascending to the presidency of the entire university itself. For his services, he had received a title of peerage from the emperor. So long as he might insinuate himself onto Yamakawa's team, Fuji had high hopes that the access problem would resolve itself.[38]

The weightier matter on Fuji's mind instead concerned conditions attending experiments. Fukurai insisted on accommodating experimental subjects in their peculiarities in order to form "friendly" bonds.[39] Even psychologists less supportive of Fukurai's work still agreed that concessions to individual "personality" (*jinkaku*) were required for experiment.[40] These demands placed physicists at a loss. As Fuji's senior colleague in the department, Tamaru Takurō (1872–1932), phrased it, "Insofar as it is not us, but they [experimental subjects] who dictate conditions of experiment [...] research from the standpoint of physics is impossible."[41] Some physicists therefore decided to wash their hands of the matter. Fuji's former advisor, Tanakadate Aikitsu (1856–1952), declared it pointless to experiment unless subjects submitted themselves to the requisite controls.[42] For Fuji, this was an affront to science. If experimental subjects proved uncooperative, the physicist to should devise alternative methods for experiment to proceed.

One solution appeared to Fuji. In the words his colleague Tamaru, "If we are to do what they [experimental subjects] say while also proceeding in a manner sound from the standpoint of physics, we must do the work of a police investi-

36 Ichiyanagi, "Senrigan jikken," 395–396.

37 Whereas Fukurai (see note 14) referred to Nagao Ikuko by the title *fujin* (Mrs.), Fuji and Fujiwara drop this title. I render the difference here using "Nagao" by itself or, in cases where context is confusing, "the Nagao woman."

38 Fuji and Fujiwara, *Senrigan*, 3.

39 Ibid., 94–95.

40 Ichiyanagi, "Senrigan jikken," 404–405.

41 Takurō Tamaru, "Preface," in Fuji and Fujiwara, *Senrigan*, [iii]. Fuji and Fujiwara's book contains four separate prefaces. Numbering in each preface begins from [i].

42 Fuji and Fujiwara, *Senrigan*, 2.

gator or detective."[43] Tamaru had made it clear that he himself did not endorse the idea. "Behaving like a police investigator or detective," he pointed out, "is something extremely problematic for those who are scholars."[44] In contrast, Fuji believed the analogy essential. For starters, the inability to dictate exact experimental controls necessitated the construction of experimental objects that would create strict chains of evidence—who, what where, when, and how long—thereby enabling the rigorous forensic reconstruction of the scene of experiment. Put differently, physicists had to document scenes of experiment as scenes of crime, treating experimental subjects as suspects, and entrapping those suspects to expose their fraud.[45]

If this approach seemed unscholarly, then the definition of scholarship required revision. According to Fuji, those who thought scholars incompatible with detectives spoke from the perspective of "sociability" (*shakōjō no koto*). Premised on ideals of gentlemanly conduct, "sociability" required the scholar to "value personalities (*jinkaku*) and the observance of manners."[46] Yet for Fuji, personalities were to be valued and manners observed only when grounds for trust existed between parties. Therein lay the problem. The Mifune woman would only perform if allowed to touch the object with her back turned to the audience. Nagao complained that being surrounded by others distracted her. Did it not seem suspicious that "the conditions which impede so-called mental concentration precisely overlap all too well with those conditions which prevent manipulative sleight-of-hand"?[47] To trust would be dangerous.

But Fuji was not content to stop there. Distrust for him should be a foundational principle of scholarship. "In our pursuit of the truth, we must not allow ourselves any ungrounded judgments," he wrote, and "to place our trust in another person is simply one form of ungrounded judgment."[48] Here, Fuji was quick to distinguish distrust from skepticism. Skepticism was an epistemic position compatible with the "sociable" gentleman. Distrust, however, required abandoning the pretenses of sociability, and taking up the potentially unsociable stance of the detective: treat everyone and everything with suspicion of guilt. "One may accuse us of lacking manners," he wrote, "but this [distrust] is necessary from the standpoint of scholarly research."[49]

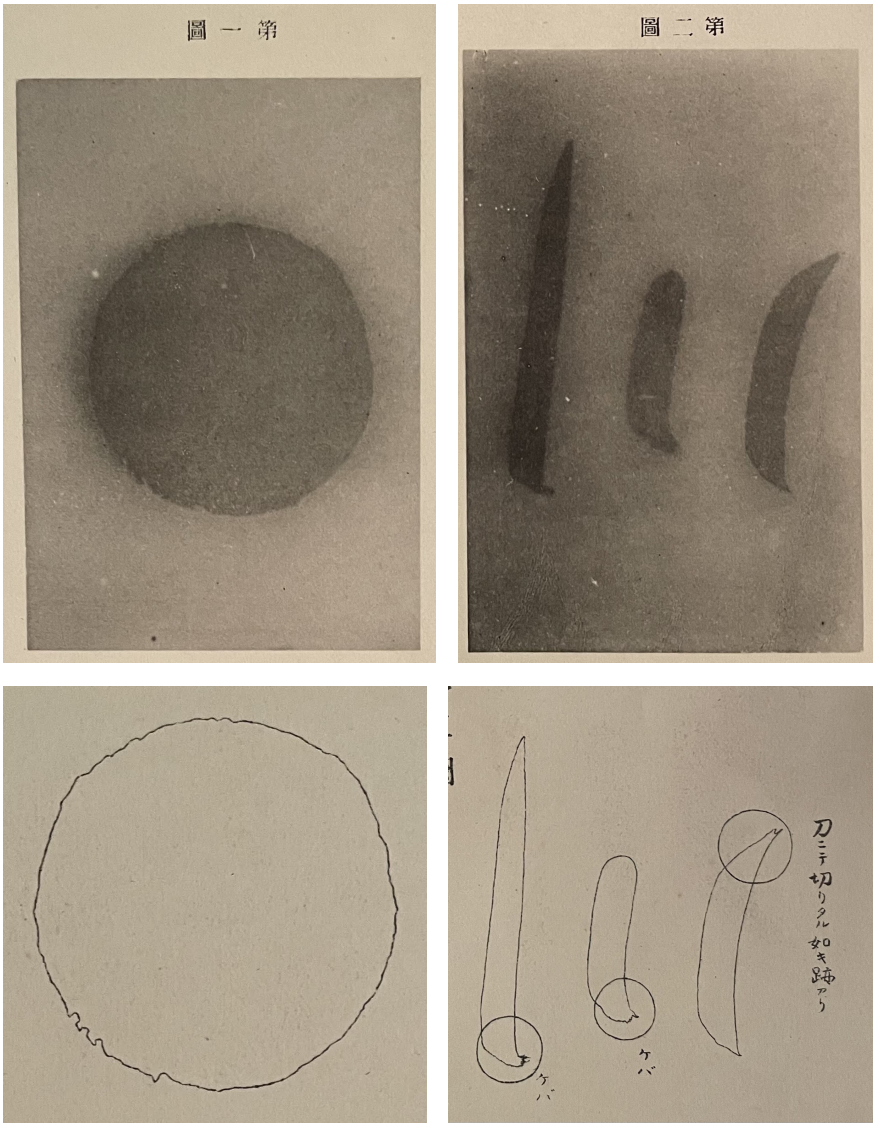
43 Tamaru, "Preface," [iii].
44 Tamaru, "Preface," [iv].
45 Fuji and Fujiwara, *Senrigan*, 32–33.
46 Ibid., 61.
47 Ibid., 54–55.
48 Ibid., 60.
49 Ibid., 60. See also 32–33, 95, for similar remarks.

It was this attitude which Fuji stressed to Yamakawa Kenjirō upon hearing news of the latter's departure for Marugame on the 4th of January, 1911. Never formally invited to join Yamakawa's research team, Fuji nonetheless took the next train down and sought the former out at his lodgings. To make the case for detective as model, Fuji began by presenting his analysis of thoughtographs by the Nagao woman which Fukurai had released for public circulation. These thoughtographs were, in the detective's hands, forensic evidence of manipulative hands. Fuji pointed to the Nagao woman's original thoughtograph of a circle (left side Fig. 1). After taking his own photograph of the image as it appeared in the newspaper, Fuji examined the resultant plate negative with a microscope. Upon doing so, he claimed to notice the circle appeared to have inconsistent edges similar to those of a pasteboard cutout. Next came the thoughtograph of the character *kawa* (right side Fig. 1). Again, microscopic examination of a plate negative taken from the image revealed that the tip of the right stroke seemed to have been cut with a knife, and that the left and center strokes had "fuzzy" tips similar to the hairs of an inkbrush.[50] This evidence was more than enough to warrant treating the Nagao woman as a suspect.

"I don't like playing detective," replied Fujiwara Sakuhei (1884–1950), a young physicist from the Central Meteorological Observatory who had been conscripted onto Yamakawa's team. Such a role, he added, was "improper for a gentleman."[51] But the decision was ultimately Yamakawa's, and the elder scholar admitted that the Nagao woman's constant complaints of distraction and fatigue frustrated him. With Yamakawa's approval, Fuji proceeded to outline a set of "secret measures" to catch the criminal in action.[52]

All in all, eight measures were taken.[53] First, Fuji had brought with him Marion & Co. plates, the emulsion of which was known to undergo a specific pattern of reduction such that double exposures could be readily identified. Second, Fuji poked pinholes in the corners of the wrappings of each plate, exposing them to a sliver of light. Lack of these markings after the experiment would indicate that the plates had been switched. Third, he placed on each wrapping a thin manganin thread so that should an outsider attempt to unwrap the plates, they would likely lose the thread. The fourth through sixth measures comprised a set of iron crosses placed at different positions and oriented at different angles. One cross was sandwiched between the stacked plates. A second cross was placed at the bottom of a pasteboard box containing the stacked

50 Ibid., 31, 53.
51 Ibid., 32–33.
52 Ibid., 33.
53 Ibid., 56–58, 62–63.



FIGURES 2A–D Top: Nagao Ikuko's early thoughtographs. Bottom: Fuji's microscopic analyses of negative plates taken from these thoughtographs. Note that as the images are recreations of what appeared on the negative plates, the figures appear inverted. From Fuji Noriatsu and Fujiwara Sakuhei, *Senrigan jikken-roku* [Record of the Senrigan Experiments] (Tokyo: Dai Nihon tosho, 1911), [i]
FROM THE AUTHOR'S PERSONAL LIBRARY

plates. This pasteboard box was then put in another larger pasteboard box, on the lid of which was affixed a third iron cross. Fuji reasoned as follows: it was possible that the Nagao woman possessed a device that emitted Röntgen rays, allowing her to expose plates without opening the boxes or unwrapping plates; radium bromide might also be used to the same effect. If so, the iron crosses would be imprinted on the plate, and the particular pattern formed by them would indicate angle of exposure. Then came final two measures. The pasteboard boxes were placed in a gold-plated box, which in turn was placed in a velvet bag under lock and key. The left and right clasps at the top of the bag were covered in lamp grease, and two thin paper strips were attached at the openings of the side. He, Yamakawa, and Fujiwara, aware of this, would open the bag delicately so as to keep the paper strips intact and avoid smudging the grease. Anyone else opening the bag unaware would not. Taken together, the ultimate goal was to replace "human watchmen" with "physical watchmen," yielding an automatic, unerring record of the Nagao woman's manipulation.[54]

Fuji worked in the dead of night for the next three nights to guarantee secrecy. The morning of the 8th of January arrived, and exhausted, he awoke later than intended. He dashed out to meet Yamakawa, and they hailed a car to the Nagao residence, where they found the other members of the team waiting with the Nagao woman and her husband. Hoping to bait the culprit, Fuji left the velvet bag in the entrance hall unattended, then joined the group in the parlor.[55]

The Nagao woman sat kneeling at a low table. A discussion followed of procedures for the day. Believing that their measures were foolproof, Yamakawa informed the Nagao woman that he would allow her whatever conditions she wished, including her desire to be alone with her thoughts. The Nagao woman seemed pleased. Yamakawa picked up a brush and commenced writing the characters he wished imprinted on the plates. The Nagao woman now stared hard at Yamakawa's writing, then closed her eyes and clasped her hands together. She rose and took the page on which Yamakawa had written, walking with it out of the room. The researchers waited. Eventually, the Nagao woman returned and told the group she felt capable today of producing an excellent thoughtograph. She was now ready to receive the plates.[56]

Fetching the gold-plated box from the velvet bag in the entrance hall, Yamakawa returned and placed these before the Nagao woman. She closed her

54 Ibid., 72–73.
55 Ibid., 73.
56 Ibid., 73–74.

eyes. Minutes passed, then the Nagao woman stood and proceeded calmly out the parlor toward the house's garden. Seconds later, they heard a shout, then another—the Nagao woman was crying aloud. Yamakawa instructed Fujiwara to find out what the fuss was about. He returned moments later and reported that the woman was in a distraught state, repeating only that she could "see no plates." Yamakawa waved his hand, "Go tell her that there are most certainly plates in this box." Fujiwara left, then returned, stating that the woman was insistent. Yamakawa reached over to the gold-plated box on the table. Gold-plated box opened up to reveal pasteboard box; pasteboard box opened to reveal an iron cross fixed to its lid at an angle. Now, they arrived at the final pasteboard box.[57]

Opening it, they found to their surprise no plates inside—only a lone iron cross sitting at the bottom of the box.[58] Yamakawa let out a gasp.[59] Though also stunned, Fuji was not to be deterred. He knew that had the lead cross been exposed to X-rays or radium bromide, it would register higher radioactivity, but not for long. He grabbed the iron cross from the table and dashed out the house, heading back to his room where his equipment awaited. The results, however, were disappointing; the increase in the cross's radioactivity fell within the instruments' margin of error.[60]

Frustrating though this was, the evening found him triumphant. The other members of the group relayed what had occurred in his absence. Notably, soon after Fuji departed the Nagao home, Fujiwara had checked on the velvet bag in the entrance hall, discovering the paper strips on its sides torn, and the lamp grease on its clasps smudged.[61] For Fuji, that was conclusive enough. The Nagao woman or some other member of their family had likely peeked inside and, realizing that they could not outsmart his traps, stolen the plates to force an end to the experiment. The next morning, a message from Fukurai informed him that the Nagao family, outraged, would bar all further experiments.[62] Fuji, however, was already satisfied. He packed up, returned to Tokyo, and began compiling his notes for publication, enlisting Fujiwara to fill in gaps.

Fuji's account was published on the 16th of February, 1911. Admittedly, some reviewers noted that the aborted experiment did not enable one to decide con-

57 Ibid., 74–76.
58 Ibid., 77.
59 Fukurai, *Tōshi*, 85.
60 Fuji and Fujiwara, *Senrigan*, 80.
61 Ibid., 78.
62 Ibid., 39–42.

clusively whether or not thoughtography was fraudulent. To Fuji's pleasure, however, the book received praise from his colleagues for employing "methods appropriate to true scholars."[63]

3 The Housewife

Thoughtography had created challenges for her and the home over which she presided. By the start of 1911, a mob had descended upon Nagao Ikuko's home in the city of Marugame, clamoring for an audience. Yet Ikuko felt prepared for the challenge. She had enjoyed an advantageous upbringing. Ikuko's father, Sakurai Mitsuka, had been a samurai, retainer of the Mōri lords of Tokuyama domain. Although Ikuko, born in 1871, came too late to enjoy the full privileges of this pedigree—samurai status was gradually abolished following the Meiji Restoration of 1868—she was nonetheless raised in relative leisure. Her father, benefitting from his lord's favor, worked as the Mori family's butler. There, Ikuko was raised as an only child, living in a cottage in the estate's gardens. There, she benefitted from a private education extended to her by Lord Mōri, who praised her poetic talents and encouraged her to mingle in aristocratic circles.[64]

The times had also changed to her favor. At the end of the 1880s, the Victorian cult of domesticity arrived in Japan. With it came a new discourse of the home and the housewife. In a milieu where former samurai were converting their status into upper-middle class identity, the new home became an ever more important means through which to demonstrate bourgeois class belonging.[65] Previously, a woman of samurai lineage would have entered upon marriage into her husband's household, a multi-generational space controlled by her in-laws, and above all her father-in-law. In contrast, the new ideal of the home stressed the sanctity of nuclear families superintended by housewives skilled in rational management.[66] From the early 1890s onward, a literature of "domestic science" boomed in popular print media, offering instruction in accounting, hygiene,

63 Tamaru, "Preface," [iv].

64 Fukurai, *Tōshi*, 154–162; Fukurai, *Clairvoyance*, 68–69.

65 Jordan Sand, *House and Home in Modern Japan: Architecture, Domestic Space, and Bourgeois Culture, 1880–1930* (Cambridge, MA: Harvard University Asia Center, 2003).

66 Yūko Nishikawa, "The Changing Form of Dwellings and the Establishment of the Katei (Home) in Modern Japan," *U.S.-Japan's Women's Journal*, English Supplement 8 (1995): 21–24; Jordan Sand, "At Home in the Meiji Period: Inventing Japanese Domesticity," in *Mirror of Modernity: Invented Traditions of Modern Japan*, ed. Stephen Vlastos (Berkeley, CA: University of California Press, 1998), 196.

medicine, nutrition, and psychology.[67] Through this literature, the housewife was to "gain control of the household," acting as "prime minister" of the home.[68] It was as this discourse emerged that Ikuko, in 1888, wed. Her spouse, Nagao Yokichi, had also tread the path of conversion from samurai to gentleman—hailing from samurai heritage, he earned a degree in Law from the prestigious Tokyo Imperial University and went on to become a civil servant. Together, they carved out a married life as a couple separate from extended family.

Their early years were admittedly difficult. Aspiring to a judgeship, Yokichi moved the couple to five different cities as he climbed the ladder of judicial appointments. Instability impacted Ikuko's pregnancy, and their first son was born sickly, dying in March of 1891 before reaching the age of three. Ikuko sought solace in meditation. Each morning after waking, she would kneel in stillness for at least thirty minutes. One year later, an unanticipated pregnancy that yielded a daughter, Aiko, solidified Ikuko's conviction in the efficacy of meditation. As her morning rituals intensified, she noticed the boundaries of herself and the world around her dissolving. At this point, visions would begin appearing to her. These visions were at first faint. But in February of 1906, the particularly vivid scene of a conflagration appeared. Three months later, a fire broke out across Utsunomiya, the city in which she and her family then lived, destroying fifty-nine buildings.[69]

Meanwhile, Ikuko's peripatetic existence settled. In 1909, her husband was summoned to Marugame, a city on Japan's southeastern island of Shikoku, to take up the position of chief justice of the prefectural court. This location distant from the urban center of Tokyo enabled the family to establish themselves with comparably greater luxury, in a gated home appointed with five rooms, a spacious front garden, and an interior garden. That space did not go unused. Aiko, born in 1892, had been joined ten years later by another daughter, Tsuruko. After that came a son who by the time of the Marugame relocation was approaching school age. Attending to chores under Ikuko's supervision were two female servants. Four dogs and some chickens rounded out the group.[70] Ikuko had now become "prime minister" of a sizeable and ever more crowded household, putting to full use the knowledge of domestic science that had blossomed during her years of marriage.

This "science" had come to address fields wide and varied. First, the home had come to emerge in its own right as a space of experiment—and, moreover,

67 Sand, *House and Home*, 55–95.

68 Nishikawa, "Changing Form," 22; Sand, "At Home," 195.

69 "Arata na senrigan fujin," *Asahi shinbun*, October 23, 1910, 5.

70 Fuji and Fujiwara, *Senrigan*, 11.

experiment practiced by housewives. Drawing on popular manuals of hygiene and nutrition, the kitchen in particular was recast as a "laboratory" for innovation in new foodstuffs, cooking techniques and devices, and cleaning products. The introduction of gas stoves and boilers, and then electric lighting, opened an arena for discussions of physics and chemistry, with texts urging women to mobilize this knowledge to pioneer efficient energy usage in their homes.[71] The role of mother as educator, meanwhile, created opportunities for housewives to further expand their scientific repertoire by offering experiments that could be performed with children. Notably, photochemical experiments were one repeated mainstay of educational activity: through, for instance, the *Home Magazine*'s [Katei zasshi] "Fun with Chemistry" column, Ikuko might have obtained grounding in the underlying principles of photography.[72]

But it was above all within discussions concerning the treatment of guests that the home as an affective and sensory space came together. Traditionally, guests beyond the family had been of a permanent fixture of large households. Households commensurate with the Nagaos' social standing would have required a dedicated room for the entertainment of visitors, including the provision of full meals, alcohol, and lodging. Against this, early twentieth-century commentators counseled moderation, welcoming visitors into the family parlor with a frugal offering of tea and dried goods.[73] That moderation was evident in the first volume of the "Housewife's Library [Fujin Bunko]" series, the *Guidebook to the Home* [Katei no shiori] published in October 1909. In its chapter on "The Housewife and Social Exchange," the *Guidebook to the Home* advised firmly setting "polite limits" on the duration of visits—less than half an hour per visitor—and the hours within which a visitor might call.[74] The purpose was both to spare the housewife's time and energies, as well as guarantee that the home would remain first and foremost a "private" family space.

Expertise in controlling visitors came to be ever more crucial for Ikuko in the half-year following June 1910. Across the whole of that month, the *Asahi Shinbun* had been running articles on Mifune Chizuko and *senrigan*. Reading these, Ikuko's husband was reminded that his wife had premonitory visions. He confided in his friend Kikuchi Shuntai.[75] Together, they engaged in an experiment,

71 "Gifu chōchin no kagaku," *Katei zasshi*, no. 36 (1894): 3–9; "Denki no shiken," *Katei zasshi*, no. 48 (1895): 33–34.

72 "Kagaku no asobi," *Katei zasshi*, no. 48 (1895): 32.

73 Sand, "At Home," 203–205.

74 *Fujin bunko: Katei no shiori* (Tokyo: Dai Nihon Kaisei gakkai, 1909), 298–300.

75 Notably, Giovanni Antonio Colazza's *Psychologie und Pädagogik des Kinderspiels*. See *Korottsua-shi yūgi no shinri oyobi kyōiku* (Tokyo: Ikuseikai, 1902).

placing folded messages they had written inside envelopes, and asking Ikuko to divine these messages. Her success merited excitement, but also circumspection; amidst the clamor over *senrigan*, they feared that a close spotlight on Ikuko might also bring reputational damage. But it appears that Shuntai lacked restraint. On the 23rd of October, 1910, Ikuko broke into the national news on the pages of the *Asahi Shinbun*, the article citing Shuntai himself as a source.[76]

Less than a week later, Shuntai paid a call, bringing for Ikuko a letter from Dr. Fukurai Tomokichi of Tokyo Imperial University. Based on what he had read in the *Asahi*, Fukurai's letter explained, it seemed that Ikuko did not need to place her hands on objects in order to use her *senrigan* powers. If true, this would further support the hypothesis that psychic force existed in a manner different from the physical world. Dr. Fukurai implored Ikuko to agree to experiments with him.[77]

Ikuko replied by fusing the new discourse of the home with concerns over the sensory conditions of experiment. True enough, she told Dr. Fukurai, direct touch was not a requirement for her. What she did require, however, was the privacy of her own home, free of unfamiliar visitors, lest any slight disruption arouse her "sensitive," "delicate" nature.[78] Indeed, she told Dr. Fukurai, the presence of others in the same room as her while meditating made her feel "electrified."[79] With this, she denied him permission to visit.

Instead, she suggested a relationship of correspondence. From late October onward, objects in sealed boxes and envelopes were sent to Marugame from Tokyo. Ikuko returned these, seals unbroken, with her response as to what lay inside. Several exchanges followed until mid-December, when Dr. Fukurai wrote excitedly. The most recent box sent, he informed her, had contained the undeveloped plates of photographs of calligraphic inscriptions. As usual, Ikuko had returned the box without breaking the seal, along with her guesses, which correctly identified the characters of the calligraphic inscriptions. The latter, however, was not the remarkable point. Rather, Dr. Fukurai reported that upon developing the plates himself, he discovered additional shapes that had not been part of the original photographs. Could these be Ikuko's own thoughts? In attempting to mentally read the plates, might she also have also allowed her mind to write on them?

Dr. Fukurai reiterated his desire to go to Marugame and perform experiments in person. At stake was the possibility of a new power that he called

76 "Arata na senrigan fujin," 5.
77 Fukurai, *Clairvoyance*, 70.
78 Fuji and Fujiwara, *Senrigan*, 16, 54.
79 Fukurai, *Clairvoyance*, 73.

thoughtography. Before she might reply, Dr. Fukurai announced thoughtography to the press. On the 16th of December, rumors of Ikuko's thoughtographic abilities began to make headlines. Five days later, a group of four young men presented themselves at Ikuko's gate, claiming to have been sent by Kyoto University. She turned them away, only to find them there again the next day, and the day after.[80] Nor were they the only ones. Journalists came snooping.[81] Two or three photographers were camped out at all hours outside their gate.[82] Then there were the police. Authorities had been increasingly concerned about the disruptive implications of alleged psychic powers, with unauthorized practice of hypnotism criminalized in 1908.[83] One night, Ikuko awoke to her dogs barking. Two detectives, having scaled the wall and entered her home, were hiding in her garden.[84]

In the face of this invasiveness, Ikuko reconsidered her options. Her own efforts to fully rebuff visitors having failed, she employed scientific authority to her advantage. She would give Dr. Fukurai what he had long wanted: in-person access. In return, he was to serve as intermediary, using his standing to shield her from other requests.[85] Dr. Fukurai agreed and, accompanied by three assistants, arrived at her home on the 26th of December.

That home was Ikuko's domain, and key strategies of control remained at her disposal. In earlier letters, she had impressed upon Dr. Fukurai her sensitivity, her need for solitude to elicit her powers. Now, she told him, her concentration had been broken by reporters, photographers, and police, whose pestering left her "badly fatigued," and therefore unlikely to perform well.[86] Compounding this was the physical nature of her home. However, much Japan had lately assimilated Western ideas of domestic space as a private sanctum positioned against the external world, internally most homes remained architecturally and materially porous. Importantly, Japanese homes, using sliding screens as room partitions rather than solid walls and doors, made sounds carry and shadows visible throughout.[87] Setting up his experiments in Ikuko's home, Dr. Fukurai found this sensory porosity on full display: Ikuko's younger daughter and son would constantly crack open the screen to the room where he, his assistants,

80 On the Kyoto team, see Ichiyanagi, "Senrigan jikken," 394–397.
81 Fuji and Fujiwara, *Senrigan*, 107, 119, 121.
82 Ibid., 36.
83 "Keihō kaisei," *Kanpō*, no. 7142 (1908), 4.
84 Fuji and Fujiwara, *Senrigan*, 35.
85 Fukurai, *Tōshi*, 237.
86 Fukurai, *Clairvoyance*, 87.
87 Sand, "At Home," 202.

and Ikuko worked, peeking inside and whispering to one another. Ikuko did little to stop them.[88] Three rocky days of tests ended in futility: with journalists outside and children within, Ikuko lacked the conditions to concentrate. Disappointed and with the New Year holidays arriving, Dr. Fukurai agreed to break, and left Ikuko's home on the night of the 29th.

When Dr. Fukurai and his team returned on January 3rd, Ikuko had curated a scene for them ever direr. Arriving, the researchers were told that Ikuko could not go out to meet them. Instead, a maid escorted them to the backmost room of the house. There, Ikuko sat alone in darkness, save for "a little sunlight breaking through the crevice" of a window. She felt "light in the head," she reported, and declared that experiments for the day would be impossible.[89] Although frustrated, Dr. Fukurai did not press further. He did, however, inform her that a young researcher named Fujiwara had arrived in town, bringing word that Dr. Yamakawa Kenjirō was on his way to Marugame with his own research team. Ikuko reminded Dr. Fukurai of their agreement: it was to him and him alone that she had granted exclusive access, and he was to help her reject other requests. Dr. Fukurai considered the matter out of his hands: so eminent a scientist as Dr. Yamakawa could not be refused.[90]

Dr. Yamakawa did indeed arrive the next day, and Ikuko sensed his impatience. Alighting from the afternoon train, he proceeded immediately to Ikuko's home. Including Fukurai's team, there were now ten researchers gathered at her residence.[91] Ikuko again invoked sensory conditions to her defense. She told them that she had never hosted this number of guests, and that their presence, as well as the sound of their pens scratching away in their notebooks, unsettled her.[92] In addition, she could sense an air of suspicion and doubt. Physicists had already been outspoken in the press about their disbelief in psychical abilities, and that distrust created in her a feeling of being "pursued by uneasiness."[93]

Her uneasiness mounted as Yamakawa's experiments began. Each time she meditated, she felt "something akin to a dark cloud of skepticism that obstructed her mind's eye with an enveloping blackness."[94] As the sun began to set, Dr. Yamakawa begrudgingly broke for dinner, but returned again that night. Ikuko pointed to the unconventionality of calling outside of normal vis-

88 Fukurai, *Clairvoyance*, 100.
89 Ibid., 113.
90 Fuji and Fujiwara, *Senrigan*, 134.
91 For the roster, see Fuji and Fujiwara, *Senrigan*, 9–10.
92 Ibid., 76.
93 Fukurai, *Clairvoyance*, 85.
94 Fuji and Fujiwara, *Senrigan*, 25.

iting hours.[95] Her attempt at rebuff had only partial effect. While retreating for the evening, he returned at 9am the next day. Before he could begin, however, Ikuko's younger daughter came to her. After hushed discussion, Ikuko told the assembled researchers that her child had stomach pains. She asked Dr. Yamakawa to leave so that she might attend to motherly duties. He reluctantly acquiesced, stating that he would visit again on the 8th of January, and expected to see thoughtography demonstrated.

Ikuko asked her husband to take a rare day off from work to attend the proceedings. Dr. Yamakawa arrived again on the morning of the eighth, meeting Nagao Yokichi in the entrance hall. The prefectural chief justice had an imposing demeanor, and one of Dr. Yamakawa's assistants later remarked that one could perceive, "at the bottom of his [Nagao Yokichi's] gaze, a profound severity that impressed itself fearfully onto those guilty of crimes."[96]

It was with the severity of the chief justice that the day ended. The experiment had started out on a positive note, Ikuko announcing that she felt restored to high spirits. Yet mid-experiment, she collapsed in tears, crying of Dr. Yamakawa's cruelty. Seeking to trick her, she sobbed, Dr. Yamakawa had in fact brought no photographic plates at all.[97] Her words bore true: the box given to her in fact contained no plates. Dr. Yamakawa seemed stunned, repeating only that the plates "must be there."[98] While Ikuko sobbed, her husband, who had taken the day off to attend the experiment, grew furious. Such subterfuge was to him appalling, and he demanded whether the so-called researchers assembled there "really knew any manners," singling out in particular one research assistant, a certain Fuji, who had bolted out of the house making "no apology or word of comfort."[99] In a fit, he requested that the researchers depart.

The next day, the Nagaos announced a moratorium on all further research visits. Dr. Fukurai nonetheless called, albeit only to offer his apologies.[100] Two weeks later, Ikuko fell ill, growing feverish with headaches, fatigue, chest pains, and strained breath. A physician was summoned. The diagnosis: pneumonia. She died from sepsis on the 26th of February, 1911.[101]

95 Ibid., 26.
96 Ibid., 10.
97 For the day's main events, see Fukurai, *Clairvoyance*, 136–138.
98 Fuji and Fujiwara, *Senrigan*, 85.
99 Fukurai, *Clairvoyance*, 137.
100 Ibid., 122–127.
101 Ibid., 130.

4 Sensory Worlds of Experiment

With her died her secrets. And rather than seeking those secrets to render verdict on whether or not she was a fraud, we might do better to suggest the following: faced with researchers clamoring for access, Ikuko leveraged sensory claims about the home and the housewife's right to oversee this space to frustrate their demands for experiment. On the one hand, she could argue that researchers disrupted the sanctity of domestic privacy so needed for her concentration. On the other hand, once allowed into her home, researchers found themselves at the mercy of a host of familial distractions—peeping children, sick daughters, irate husbands. Researchers thus adopted different personae to overcome these barriers, in the process articulating two different forms of masculinity with contrasting approaches to experimental ethics and evidential evaluation. Fukurai's gentleman sought to insinuate himself into the home through empathetic techniques of association, establishing a "friendly" rapport and earning enough trust to eventually act as "guide" to his experimental subjects. Fuji's detective, in contrast, aggressively sought to demolish codes of social propriety, interrogating rather than trusting, suspecting rather than empathizing. The interaction of gentleman, detective, and housewife within the space of the home suggests that thoughtographic 'experiment' in the singular was in fact a contestation of plural assumptions about how to look, touch, and feel in the presence of others. Powering this conflict was a friction between imperatives of Westernization, a process that embraced the drive to legitimate Japan as a modern scientific power as much as it did the emulation of bourgeois Victorian domesticity. "Western science" beyond the West contended with contradictory vectors within 'Westernization,' complicating our existing accounts, classically Anglocentric, of the transition from household to laboratory as experimental space, and the construction of modern practitioners' identities.[102]

Indeed, it is telling to note that following Ikuko, Fukurai limited his tests primarily to unmarried women and men. Of his three female subjects from 1911 to late 1913, two were unmarried. From 1914 onward all of Fukurai's subsequent experiments in supernormal powers were performed solely on men. His choice stands out as all the more given his own admission that the abili-

102 Cf. Steven Shapin, "The House of Experiment in Seventeenth-Century England," *Isis* 79, no. 3 (1988): 373–404; id., "'A Scholar and a Gentleman': The Problematic Identity of the Scientific Practitioner in Early Modern England," *History of Science* 29, no. 3 (1991): 279–327; Simon Werrett, *Thrifty Science: Making the Most of Materials in the History of Experiment* (Chicago: University of Chicago Press, 2019), esp. 42–63.

ties of male subjects were "not so great" compared to the women on whom he had earlier experimented. To this personal testimony must be added two more observations: the pronounced role of female mediums such as *miko* priestesses, *ichiko* and *itako* in Japanese religion that, while drawing on premodern legacies, intensified in the twentieth century; and the explicit predominance of female mediums in the western psychical research on which Fukurai drew.[103] Fukurai's later favoring of male subjects ran directly against both trends, and teases the possibility of a desire to escape from the tensions of the housewife-ruled home which he experienced with Nagao Ikuko.

Capturing those tensions has involved my own experiment, or even metaphorical sleight of pen, juxtaposing elements of the same patriarchal sources to construct three parallel "stories" of contrasting sensory worlds. The importance of narrative experimentation has already been well explored as a means to recover marginalized voices.[104] And in this way, the combination of sensory studies with narrative experimentation has the potential to open up new methods of addressing those perennial questions of knowledge and power so dear to historians of science. In introducing his experimental record of thoughtography to readers, Fuji Noriatsu declared, "What I have recorded below is accurate, insofar as my own five senses do not differ from those of a normal person."[105] Yet as sensory studies have shown, so-called "normal" senses are precisely the site of continual struggle.[106] Rather than taming this disorder into a single narrative of the past, historians may wish to dwell in the contradictory pluralities that the senses offer us, refusing resolution in favor of any one sensory world. Such an approach takes on particular salience for those who work with experimental accounts. In her classic essay on the senses in chemistry, Lissa Roberts has proposed that the subordination of direct bodily experience to mediated

103 On the tradition of the *miko* priestess, see Bernard Faure, *The Power of Denial: Buddhism, Purity, and Gender* (Princeton: Princeton University Press, 2003), 287–324. On female mediums in twentieth-century Japanese new religions, see Kyōko Nakamura, "Revelatory Experience in the Female Life Cycle: A Biographical Study of Women Religionists in Modern Japan," *Journal of Japanese Religious Studies* 8, nos. 3/4 (1981): 187–205; Fumiko Miyazaki and Duncan Williams, "The Intersection of the Local and Translocal at a Sacred Site: The Case of Osorezan in Tokugawa Japan," *Japanese Journal of Religious Studies* 28, nos. 3/4 (2001): 399–440. On female mediums in western psychical research, see Beth A. Robertson, *Science of the Seance: Transnational Networks and Gendered Bodies in the Study of Psychic Phenomena, 1918–40* (Vancouver, BC: UBC Press, 2016).

104 Recently and famously, see Saidiya Hartman, "Venus in Two Acts," *Small Axe* 12, no. 2 (2008): 1–14.

105 Fuji and Fujiwara, *Senrigan*, 9.

106 Lennard J. Davis, *Enforcing Normalcy: Disability, Deafness, and the Body* (London: Verso, 1995).

instrumentation "eras[ed] the presence of direct sensory evidence from the public records," suppressing mention of "smelling, tasting, touching, [and] listening."[107] Put simply, the public record of science is a normalization of the senses: each claim to a putatively single, stable phenomenon called *experiment* hides within it unresolved conflicts between plural sensory *experiences*. If so, then future efforts may lie in recovering the suppressed sensory pluralities in our sources to reveal fault lines in the power relations of knowledge production. It is this gesture of destabilization which my article has sought to perform.

107 Lissa Roberts, "The Death of the Sensuous Chemist: The 'New' Chemistry and the Transformation of Sensuous Technology," *Studies in the History and Philosophy of Science Part A* 26, no. 4 (1995): 507.